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ABSTRACT

A study explored similarities and differences among communication apprehensive (CA) and underprepared college students enrolled in speech classes in order to determine whether the two groups required different instructional activities. Subjects were freshmen through senior students enrolled in basic speech courses. Academic achievement was determined through student scores on the American College Test (ACT) and grade point averages (GPA). Each subject also completed a measure of communication apprehension. Results showed that CA students shared several traits with underprepared students, including the need for structure, low tolerance for ambiguity, and dogmatism. They also shared negative factors derived from rural settings and minority group backgrounds. Females appeared to be linked with communication apprehension as well as a lack of preparation, and both CA and underprepared groups had lower than average GPAs and ACT scores. The findings suggest that the two groups require different instructional approaches, with special sections for CA students being established within the speech communication department and instruction for the underprepared student given over to college developmental programs. (FL)

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An Exploratory Study of Relationships of Characteristics and Test Scores Among Communication Apprehensive and Underprepared Students

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Speech educators may not only be concerned about providing instruction for the traditional student, but for two other types of speech students as well. Primarily the communication apprehensive student is recognized as manifesting distinct personality characteristics and also showing lower than average ACT and GPA scores.[1] In higher education today, moreover, another student termed the underprepared student, also displays unique characteristics and different ACT and GPA measures.[2] The implication here is that these two students may require different modes of instruction, different from traditional students and different from each other.

Research shows communication apprehensive and underprepared students to be alike in several personality traits, background, and sex factors. Although studies show that each of these student types are similar in their lower (than traditional students) ACT and GPA scores, possible differences may lie in manisfestation of anxiety, attitude toward education, and the cognitive/non-cognitive dimension. In an effort to give direction to speech educators in determining educational practices, this study will examine characteristics and academic relationships of the CA and underprepared student in comparison to the traditional student.

The general question addressed by comparisons is should separate speech instruction be provided for the two students types or can the two be combined for instructional purposes? More specifically, the similarities and differences between CA and underprepared students need to be identified as

to:

1. What are the characteristics they have in common?
2. What are the instructional alternatives for the CA and underprepared student?

The pages that follow will focus on extant similarities and differences between CA and underprepared students both with one another and with their more traditional counterparts.

Communication Apprehension

Communication apprehension is defined as, "an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons." CA specifies the avoidance or withdrawal from communication and differs from other constructs in that it specifies only fear and anxiety as the causal agent. Since early works of Lomas in 1934, speech educators have sought to define, determine causes as well as effects, and develop methods to overcome this situation. Researchers now suggest that the malady may be pervasive in personality, social and demographic characteristics, and sex differences, and have impact on student attitude and achievement.[3]

Being conceptualized as an individual trait, CA appears to be meaningfully associated with several individual personality traits. McCroskey, Daly, and Sorensen have found a moderately high positive correlation with general anxiety and moderately high negative correlation with tolerance for ambiguity, self-control, adventurousness, surgency, and emotional maturity. Significant but less meaningful correlations were found between CA and

dogmatism, external control orientation, trustfulness, dominance, character, confidence, and need to achieve (negative).[4]

When asked to evaluate CA interaction, respondents reported CA's to be low in assertiveness and responsiveness, characterized as cool, independent, uncommunicative, disciplined, rational, hard-to-know, task oriented, and business-like. Behaviors expected by people with high CA to be exhibited more frequently were associated with negative perceptions such as: less socially attractive, less task attractive, less competent, less sexually attractive, less attractive as a communication partner, less sociable, less composed, less extroverted, but of slightly higher character.[5]

Demographic studies also reveal distinct and meaningful findings describing persons with high CA. A study by Richmond and Robertson[6] suggests that children who are reared in a rural environment are more likely to develop high levels of CA than children reared in a more urban environment. Moreover, Grutzeck[7] found that rural children have more difficulty than others in communicating according to the norms of expectancy of their schools. Additionally, a disportionally large percentage of college students identified as experiencing high levels of CA were children from first and second generation ethnic families.[8]

Concern about effects of CA have also centered around differences in biological sex. A study which explored the possible impact of biological sex and general communication apprehension, shyness, and apprehension about broad communication contexts indicated that males tend to be more shy than females. Females, however tend to be somewhat more apprehensive about public speaking than males, but females and males do not differ meaningfully in terms of

general apprehension.[9]

Little if any correlation has been found between CA and intelligence.[10] However, correlation of .50 and .60 between general intelligence scores and school grades may be typical. In comparison of intelligence tests, Sartain[11] found IQ and achievement to have a correlation of .58. This would indicate that IQ is clearly related to an individual's academic achievement. While studying CA, intelligence, and academic achievement among secondary school students, Davis and Scott[12] concluded in support of this position that when intelligence was removed as a source of variance, achievement variance attributable to either CA or verbal ability was not particularly meaningful. Moreover the study concludes when intelligence was not a covariate, CA was most associated with standardized achievement and verbal activity was most associated with GPA.

Additional anxiety and apprehension may plague the high CA student in the form of test anxiety. In substantiating the impact of CA as well as test anxiety on achievement, Scorr, Wheeless, Yates and Randolph examined three indicants of achievement and the effects of test anxiety and CA. Their findings substantiate the correlation of CA and test anxiety and suggest that achievement was most associated with anxieties about test taking.[13] The results of this study suggest the achievement effects reported by previous research may have been mediated by test anxiety. In view of researched effects of test anxiety on students with high CA, it would seem that the potentially mediating effects of test anxiety would have been controlled or covaried in prior research (relevant to the ACT). Unfortunately this does not seem to be the case and instructional communication researchers seem to have

overlooked the degree to which test anxiety and CA are associated with one another.[14]

In comparison, many of the characteristics of the CA student typify the underprepared student, although interesting differences do appear. Personality variables of the underprepared student seem to bear on their success in university and college environments. Those students are found to be less autonomous and more dependent upon authority figures for structure and guidance than do traditional student peers, moveover they may tend to have difficulty with viewpoints and individuals that differ from their own perspective. Also, they are markedly less self-confident in their intellectual skills and are more eager for and expectant of assistance with their academic work, yet are more hesitant to seek that help. The underprepared student appears to show less interest in scholarly pursuits and to prefer activities decidedly non-intellectual in nature. Lastly, they are individuals who have a low tolerance for ambiguity and delayed gratification. Maier and Anderson summed this up by expecting "the 'new' student to prefer those activities that require low levels of cognitive skills that also stress physical-social content as opposed to intellectual-aesthetic interests."[15]

Moreover, self-esteem, a personality trait found to be negative in the CA student, seemed not to be a variable of concern and apparently is not correlated with academic achievement.* On the other hand, schools such as

*Director of Special Services, Western Kentucky University, Mrs. Alice Rowe, explains, "Self-esteem is apparently not correlated with academic achievement. We observe that students may have good self-esteem without good academic achievement, and good academic achievement without good self-esteem."

Sacramento City College and Utah Technical College use self-concept and personality assessment in the total information gathering, but emphasize academic testing and the student's previous educational record as their primary identification method. Cross reported that between 1970-1974, the self-concept objective of developmental education remained a close second to preparing the student for regular college work. This seemed a result of colleges beginning to pay more attention to personal-social variables which influence intellectual outcomes, sometimes with overzealous belief in their impact.[16]

Anxiety toward learning, a major negative component in the CA student, does not appear to be an important factor in the 'new' student's profile. A study conducted at a major university proposed to teach and test a method for overcoming anxiety toward the learning and fuction of math. The instructor, working with the Special Services Program, approached a class of underprepared students who were grouped for remedial math instruction. The students were given a math anxiety test in preparation for the beginning of instruction. Examination of the test results suggested that students did not show enough anxiety to proceed with the anxiety-overcoming method, but indeed needed primarily skill development.*

A major percentage of the 'new' students are Caucasions whose fathers work at blue-collar jobs, although a substantial number are from minority groups. With attitudes similar to those toward vocational training, the 'new' college student appears to have very clear patterns of interest, positive motivation, and satisfactions in the area of vocationally oriented curricula.

*Special Services Program, Western Kentucky University

They often come to college with a career choice made and see their higher education experience in very pragmatic terms.[17]

The 'new' student may be distinguished more by their low academic test scores than any other single measure, including race, sex, and socioeconomic status. They are defined as students who:

"1. have scores in the lowest one third among national samples of high school students taking the traditional academic ability tests.

2. have had consistent difficulty performing traditional academic tasks throughout their academic experience, and

3. do not find present forms of education to be appropriate or adequate."[18]

Surveys have reported enormous increases in academic services for the 'new' and underprepared student, for example, Roueche and Snow found 86% of all colleges are providing some special service for the academically disadvantaged. The goals of these programs appeared to be in preparing students for occupational-technical programs, to handle the regular curriculum for increasing minority and low-income enrollments, providing students with saleable skills and with life survival skills, and for improving undergraduate education.[19]

An example of these services is offered by Western Kentucky University where the Learning Assistance Center provides material and tutorial help in writing and math skills for students referred by faculty and those students showing an ACT score of 15 and below. The Special Services Program accepts only students who are economically disadvantaged or who come from a rural background, have an ACT score below the institutional mean, who show deficiency in one or more areas of the ACT, and show a GPA of 2.2 and/or are on academic probation.

In consideration of the data review for this study, there was no mention of differences in male and female members of underprepared students, nor in their academic background or achievement. The only mention was to include "women" among groups of 'new' students seeking education in the current trend.[20] This lack of specification could be the result of stringent equal opportunity practices precluding the specification and/or data collection in reference to women as well as a hesitancy to specify the distinction in print. The mention of women as a group among underprepared students, however does indicate difference.

Given the parallels between CA and underprepared students, this research sought to explore those relationships by examining selected indexes of student characteristics and academic performance. In an effort to determine if the CA and underprepared student are correlated as to ACT and GPA, the accepted designation of underprepared by developmental programs, below 15 on the ACT and 2.2 on GPA, was used for comparison. Exploration of CA scores on ACT and GPA along with sex differences revealed meaningful data.

Procedure

Subjects

Students, freshmen through senior, enrolled in basic speech classes from a large southern university were used to form groups for two comparisons. The scores of these groups were used to compare CA students' ACT and GPA scores with traditional ACT and GPA scores. In the first comparison 138 CA students' GPA scores were compared with 150 traditional students' GPA scores. In the second comparsion 143 CA students' ACT scores were compared

with 156 traditional ACT scores.

The apprehensive group was divided into 59 males and 84 females whereas the traditional group was composed of 67 males and 89 females.

Measures

Oral communication apprehension was assessed with a 25-item version of the Personal Report of Communication Apprehension. The PRCA is a Likert-type, self-report measure designed to ascertain feelings of apprehensiveness in a full range of social contexts. The measure displayed reliability estimates of above .90.[21]

Achievement was operationalized as scores on the American College Test (ACT) taken by the Ss during their final year of high school. The median split-half reliabilities for the median of the ACT is .96. The K-R 20 reliabilities estimates the median for the composite score to be .91. The coefficient alpha a estimates the mean at near .90 on the ACT composite.[22] The national mean for the ACT for 1980 stood at 18.9. The ACT is generally used as a predictor of academic performance and is thought to be more predictive and reliable than high school class grades (GPA).

Further achievement was operationalized by the Ss grade point average (GPA) through and including the fall semester of 1980. The GPA available represented a minimum of one full year and up to a maximum of four years.

Statistical Analysis

To assess the relationship, if any, between sex and group composition (apprehensive and traditional) a simple X^2 analysis was executed. Sex and group

membership are found unrelated in any but a random fashion.

To determine if ACT and GPA were associated, data from 286 subjects were tested by Pearson product moment correlation. The relationship between ACT and GPA was statistically significant ($r. .46$ $p < .0001$) but not strong. A correlation of .46 represent 21% explanatory power and suggests a moderate relationship.

To determine relationships of GPA, sex and apprehension, data from 285 subjects were tested by analysis of variance. No effects of sex and apprehension on GPA were shown.

Means determined by multiple classification analysis showed a grand GPA mean of 2.60. All males varied -0.07, all females 0.05, apprehensive subjects, 0.03, and traditional subjects, -0.02 of the mean. There were no differences shown due to each considered after the other had been withdrawn. There is no change here since X^2 has shown that sex and apprehension are unrelated with respect to one another.

To determine the impact of sex and apprehension on ACT scores an analysis of variance was conducted. The results are presented in Table 1 and indicate a definite effect of apprehension on ACT and that sex approaches the conventional level of significance. The two way interaction between sex and apprehension and ACT scores is also significant.

TABLE 1

Analysis of ACT, Sex and Apprehension

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F
Main Effects	385.130	2	192.565	8.467	0.001
Sex	76.353	1	76.353	3.357	0.068
Apprehensive	304.552	1	304.552	13.390	0.001
2-Way Interactions	112.354	1	112.354	4.940	0.027
Sex - Apprehensive	112.354	1	112.354	4.940	0.027
Total	6911.367	285	24.250		

A new variable, BOTHVAR, was created as a combination of sex and apprehension on GPA and ACT. BOTHVAR was employed to examine combinations of male-apprehensive, male-traditional, female-apprehensive, and female traditional. Only small and insignificant effects were found for GPA.

Analysis of variance of ACT and the new variable (BOTHVAR) were explained by simultaneous classification by sex and apprehension. With the use of the SPSS program ANAOVA (N-way analysis of variance) and multiple classification analysis a significant F was found ($p < .00$"). Using the grand mean of ACT score 17.09, apprehensive males varied -1.25, traditional males 2.28, apprehensive females -0.97, and traditional females 0.03. The spread of effects on the means is noticeable. Apprehension appeared to explain 3½ points difference on the ACT among males, and only one point among females. Sex explained ¼ point difference among the apprehensives, but 2¼ points among

traditional subjects (see Table 2).

TABLE 2

Deviations from Grand Mean and Range of ACT Scores
Due to Sex-Apprehension Interaction

Average ACT Scores	Male	Females	Range due to Sex	Range due to Apprehension
Apprehensive	15.74	16.12	.28	3.53
Traditional	19.25	17.06	2.25	1.00
Total N	121	165		

TABLE 3

Summary of Comparisons of Traditional, Underprepared, and CA Students' ACT and GPA Scores

	Traditional National	Underprepared National	Communicative Apprehensive (this study)
ACT	18.9	15	15.9
GPA	2.5	2.2	2.6

Discussion

The purpose of this study was to explore similarities and differences among communication apprehensive and underprepared speech students and determine if instructional alternatives should be different or similar. While the CA and underprepared student may share similarities of personality traits of low tolerance for ambiguity, dogmatism, the need for structure, they also may share negative factors derived from the rural setting and minority background. Women appear to be linked with CA as well as underpreparedness, and both groups show lower than average ACT and GPA measures. Important differences may focus on the debilitating anxiety which the CA student experiences which is underscored by high test anxiety. Also, attitudes toward scholastic achievement demonstrated by the underprepared student may be comparably important. Lastly, since no correlation has been found between intelligence and CA, another difference from the underprepared student may be in the cognitive/noncognitive dimension. Research would indicate that the two student types have similarities, however obvious differences prevent catagorizing the two as having the same over-all characteristics and instructional needs.

Data from this study has revealed no association between sex and apprehension, significant correlation between over-all ACT and GPA scores, no effects of sex and apprehension upon GPA scores, but definite effects of sex and apprehension upon ACT scores. Significant findings of the study which show the CA student to be correlated with ACT but not GPA may be meaningful. The ACT, a predictive measure, reflects preparation before the measuring of experiences on the college campus, whereas the GPA may be a product of experiences in the college enviornment, accumulated over

a long period of time and accomplished in small steps which may or may not have had as much possible anxiety involved. At any rate, the findings pose a question as to why this group of apprehensive students showed no negative correlation with traditional students on GPA when other research studies show significant negative correlation.

Perhaps the most important findings of the study were revealed through a combination of effects of sex and apprehension on GPA and ACT, but again GPA scores revealed only insignificant effects. When combined effects of sex and apprehension were performed on ACT, however, the spread of effects on the means appears to be noticeable. Apprehensive males appeared to be the most affected by apprehension on ACT, scoring 3½ points differently from traditional males. Apprehensive females showed only one point negatively different from the traditional females. This suggests that the male who is apprehensive may score lower in comparison to traditional males, traditional females, and apprehensive females on ACT measures.

In view of the fact that the CA and the underprepared student appear to manifest different needs, implication of this study for the speech educator may develop along two lines. First, provision of services in speech communication departments which are focused upon alleviating oral communication anxiety seems appropriate. Provisions for the CA student have been approached by various institutions with special sections both within and outside of the speech classrooms. Several successful methods include systematic desensitization, hypnosis, group counseling, relaxation induced by biofeedback, and reality therapy.[23] Students are usually designated by the use of an attitude inventory and then invited to participate in special

instruction. Examples of on-going programs would include the Reticence program at Pennsylvania State University which uses a goal setting and skills approach, University of Flroida where systematic desensitization is applied, and Western Kentucky University where the procedure consists of development of rational thinking, goal setting and skill units. Reports tend to suggest a growing number of schools which are now providing these special classes for the CA student.

The second implication of the study indicates services for the underprepared student appear to be more successfully handled by integrated campus agency efforts than by isolated courses in separate college departments. Roueche and Snow[24] found that developmental programs characterized by individual courses accounted for the organizational pattern of 33% of senior and 40% of community colleges reporting low success with underprepared students. However, programs organized by department or division accounted for the organizational pattern in 67% of both senior and community colleges in the high-success group. Reasons given for better results of the total integrated programs seemed to stem from the presence of an administrative leader, who coordinated the various areas of instruction, counseling, and other support services. Implementation of systematic needs assessment, self-concept development, structuring of team assignments and evaluation of results of efforts was possible under this structure. Establishing a division or department of developmental studies is apparently a dramatic move toward effecting a change within a college which is demanded by the definition and criteria of the underprepared student.

In conclusion, although the CA and underprepared student apparently

manifest similarities, the differences between the two seem to indicate different types of instructional alternatives. Moreover, special sections for the CA student within the speech communication area seem appropriate whereas instruction for the underprepared speech student may be better facilitated by special campus developmental programs.

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[15]John E. Roueche and Jerry J. Snow, Overcoming Learning Problems (San Francisco: Jossey-Bass, 1977), p. 4.

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[17]Barna, Haws, Kenfelkamp, p. 109.

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[19]Barna, Haws, Kenfelkamp, p. 107-108.

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[22]McCroskey (Summary), p. 9.

[23]Roueche and Snow, p. 24.